

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A differential amplitude detection diversity receiver employing maximal ratio combining MRC, comprising:

a plurality ~~majority~~ of decision variable calculating sections, each configured to compute ~~computing~~ at least one amplitude decision variable ~~variables~~, said amplitude decision variable being computed by multiplying ~~the~~ a distance ~~distances~~ of a signal by an amplitude of the signal, the signal being ~~the amplitudes of signals currently~~ received at ~~each antenna~~ one or more antennas; and

an amplitude decision section ~~configured to compose~~ the for composing each computed amplitude decision ~~variables~~ variable of said plurality of decision variable calculating sections and ~~to determine~~ for determining said ~~the~~ amplitude of the received signal by selecting an amplitude candidate value, said amplitude candidate value corresponding to a ~~certain~~ composed amplitude decision variable from ~~the~~ said ~~composed amplitude decision variables~~ plurality of decision variable calculating sections.

Claim 2 (Currently amended): The diversity receiver of claim 1, wherein ~~the~~ each of said plurality of decision variable calculating ~~section~~ sections comprises:

a plurality ~~majority~~ of differential amplitude calculators ~~Differential Amplitude Calculators~~ (DAC) ~~configured to calculate the~~ for calculating an amplitude ratio ~~ratios~~ between the an amplitude ~~amplitudes~~ of the signal being received at the ~~an~~ (n)th sampling period and an amplitude of the signal being received at an (n-1)th sampling period, ~~wherein n is an integer~~ ~~(where n is integer)~~; and

a plurality ~~majority~~ of Amplitude Hypothesis Calculators ~~amplitude hypothesis calculators~~ (AHC) ~~configured to for compute~~ computing said the amplitude decision variable ~~variables~~ of the received signal, each of said plurality of amplitude hypothesis calculators ~~by~~ calculating the a distance, the distance being distances, between the said amplitude ratio ~~ratios~~ of the signal ~~signals~~ being received at each of said antenna ~~one or more antennas,~~ and each said amplitude candidate value, and by multiplying the distance ~~distances~~ by the said amplitude ~~amplitudes~~ of the signal ~~signals~~ being received at the ~~said~~ (n)th sampling period.

Claim 3 (Currently amended): The diversity receiver of claim 1, wherein ~~the~~ said amplitude decision section comprises:

an ~~Amplitude Combiner~~ amplitude combiner (AC) ~~configured to compose the~~ for composing said amplitude decision variable being ~~variables of each antenna,~~ computed by ~~the~~ each of said plurality of decision variable calculating ~~section~~ sections, each amplitude decision variable of said plurality of decision variable calculating

sections being composed by said amplitude combiner according to the said amplitude candidate value values; and

an ~~Amplitude-Detector~~ amplitude detector(AD) configured to for ~~determine~~ determining the said amplitude of the received signal by selecting said amplitude candidate value corresponding to the said composed amplitude decision variable of each of said plurality of decision variable calculating sections, whose said composed amplitude decision variable having a magnitude, said magnitude -is the being a minimum among the each of said composed amplitude decision variables variable of said plurality of decision variable calculating sections.

Claim 4 (Currently amended): A method of receiving signals using a differential amplitude detection diversity receiver employing MRC maximal ratio combining, comprising:

computing an amplitude decision variable, said amplitude decision variable being computed variables by multiplying the a distance distances between the an amplitude ratio ratios of each of the signals being received at each one or more antennas, and each an amplitude candidate value by the said amplitude amplitudes of each of the signals currently being received at each said one or more antennas antenna;

composing the said amplitude decision variable variables of each of said one or more antennas antenna, said amplitude decision variable being composed according to the said amplitude candidate value values; and

determining ~~the~~ said amplitude of ~~the received signal~~
each of the signals by selecting said amplitude candidate
value corresponding to ~~the~~ said composed amplitude decision
variable, ~~whose~~ said selected amplitude candidate value
having a magnitude, said magnitude ~~is the~~ being a minimum
among ~~the~~ said composed amplitude decision variable
~~variables~~ of each of the signals.

Claim 5 (Currently amended): The method of claim 4,
wherein ~~said computing~~ computed amplitude decision variable
~~variables~~ comprises:

calculating ~~the~~ said amplitude ratio ratios between ~~the~~
an amplitude ~~amplitudes~~ of the ~~signal~~ signals being received
at ~~the~~ an (n)th sampling period and an amplitude of the
signals being received at an (n-1)th sampling period ~~(where~~
~~n is integer)~~, wherein n is an integer;

calculating the distance, the distance being ~~distances~~
between ~~the~~ said amplitude ratio ratios of each of the
signals being received at said one or more antennas ~~each~~
~~antenna~~ and ~~each~~ said amplitude candidate value; and

computing ~~the~~ said amplitude decision variable
~~variables~~ of each of the ~~received signal~~ signals by
multiplying the distance ~~distances~~ by ~~the~~ said amplitude of
the signals being ~~amplitudes of signals~~ received at ~~the~~ said
(n)th sampling period.